

**TRANSLATION**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>IPY-171</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/JP2004/017257</b>	International filing date ( <i>day/month/year</i> ) <b>19.11.2004</b>	Priority date ( <i>day/month/year</i> ) <b>20.11.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>H04Q7/38 (2006.01)</b>		
Applicant <b>NEC CORPORATION</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>8</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of <u>6</u> sheets, as follows: <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input checked="" type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input checked="" type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-27 as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. 2-4, 6, 7, 9, 11, 14, 16, 19 as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1, 5, 8, 10, 12, 13, 15, 17, 18, 20 received by this Authority on 10.03.2006
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets fig. 1-24 as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. IV

Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees the applicant has:
- ☐ restricted the claims.
- ☒ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted the claims nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
- ☒ not complied with for the following reasons:

The "special technical feature" of the inventions set forth in claims 1 to 3, 8, 13 and 18 pertains to the call admission determinations that are associated with the bandwidth management function of the relay nodes, whereas the "special technical feature" of the inventions set forth in claims 4 to 7, 9 to 12, 14 to 17, 19 and 20 pertains to generating an encryption key for encrypting the communication between a wireless base station and a relay node. Such being the case, the inventions in question do not have a technical relationship involving one or more of the same or corresponding special technical features; consequently, said inventions cannot be considered to be linked so as to form a single general inventive concept.

4. Consequently, this report has been established in respect of the following parts of the international application:

☒ all parts.

☐ the parts relating to claims Nos. \_\_\_\_\_

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	4-7, 9-12, 14-17, 19, 20	YES
	Claims	1-3, 8, 13, 18	NO
Inventive step (IS)	Claims	4-7, 9-12, 14-17, 19, 20	YES
	Claims	1-3, 8, 13, 18	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
<p>Document 1: JP 2002-359881 A (Nippon Telegraph And Telephone Corp.), 13 December 2002, abstract; claims 1 and 5; paragraphs [0095] to [0105]; and fig. 6, 8 and 10</p> <p>Claims 1 to 3, 8, 13 and 18</p> <p>The inventions set forth in claims 1 to 3, 8, 13 and 18 are disclosed in document 1 (abstract; claims 1 and 5; paragraphs [0095] to [0105]; and fig. 6, 8 and 10) cited in the international search report; therefore, the inventions in question lack novelty and do not involve an inventive step.</p> <p>In particular, document 1 indicates that the edge routers (9') receive the band control signals and make call admission determinations in order to allocate wireless resources (paragraphs [0095] to [0105]). Therein, it is apparent that said edge routers (9') account for all of the bands throughout the entire network to be managed</p> <p>Claims 4, 6, 9, 11, 14, 16 and 19</p> <p>The inventions set forth in claims 4, 6, 9, 11, 14, 16 and 19 are not disclosed in any of the documents that</p>			

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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are cited in the international search report, and would not have been obvious to a person skilled in the art.

In particular, the feature wherein the "preliminary shared key, which is necessary for the generation of the second encryption key, is dynamically generated by means of the mechanism for exchanging keys between the aforementioned wireless base station control station and the aforementioned wireless base stations" is not disclosed in any of the documents.

Claims 5, 7, 10, 12, 15, 17 and 20

The inventions set forth in claims 5, 7, 10, 12, 15, 17 and 20 are not disclosed in any of the documents that are cited in the international search report, and would not have been obvious to a person skilled in the art.

In particular, the feature wherein the "aforementioned private network is operated using an IP address system that is different from the IP address system between the aforementioned wireless base station control station and the aforementioned relay nodes, the aforementioned wireless base station control station and the aforementioned relay nodes conduct encrypted communication using first encryption keys, the aforementioned wireless base stations and the aforementioned relay nodes conduct encrypted communication using second encryption keys, the aforementioned second encryption keys are dynamically generated by means of the mechanism for exchanging keys between the aforementioned wireless base station control station and the aforementioned wireless base stations, and the aforementioned wireless base station control

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

station communicates the aforementioned second encryption keys to the aforementioned relay nodes" is not disclosed in any of the documents.

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**Box No. VII**      **Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

Figure 24 does not conform to the disclosures in  
the description.

**Box No. VIII** Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 11, 12, 16 and 17 do not mention a "private network," and thus the scopes of the claims in question include various mobile communication systems. However only the mobile communication systems involving a "private network" that are specifically set forth in the description are considered to be disclosed by the description in the meaning of PCT Article 5, and thus said claims are not fully supported by the description in the meaning of PCT Article 6.

Such being the case, a search was carried out in relation to the inventions that are disclosed and supported in the description, which is to say the mobile communication systems involving a "private network" that are specifically set forth in the description.